

I CLAIM:

Sub B, 1

1. A tow bar assembly including at least one elongated frame member, said elongated frame member including a first member and a second member movable with respect to said first member, a locking device for releasably locking said first and second members in an extended position, said locking device including a movable member adapted to extend between and contact said first and second members to maintain said first and second members in a locked relationship, and a release device mounted on one of said members to move said movable member out of contact with said first and second members to permit slidable movement between said first and second members.

2. A tow bar assembly as set forth in claim 1, including a plurality of elongated frame members and a plurality of universal connectors, with one of said universal connectors attached to the distal ends of each of said second members for attaching said tow bar assembly to a towed vehicle.

3. A tow bar assembly as set forth in claim 2, including a connecting member comprising an apex member for attaching said tow bar assembly to a towing vehicle, and a first end of said first member of said first elongated frame member is pivotally connected to said apex member and said first end of said first member of said second frame member is fixed to said apex member.

4. A tow bar assembly as set forth in claim 1, wherein the locking device includes an opening formed in said first member, a shoulder located on said second member for registration with said opening formed in said first member when said first and second members are in said extended position, said movable member is adapted to extend into said opening in said first member and to contact said shoulder on said second member to lock said first and second members in said extended position.

5. A tow bar assembly as set forth in claim 1, wherein said locking device includes at least one opening formed in said second member for alignment with said opening formed in said first member when said first and second members are in said extended position,

said movable member adapted to extend into said aligned openings in said first and second members to lock said first and second members in said extended position.

6. A tow bar assembly as set forth in claim 1, wherein said opening in said first member is a notch, said locking means includes said notch formed in said first member, a plurality of notches formed in said second member for alignment with said notch formed in said first member when said first and second members are in said extended position, said movable member adapted to extend into said aligned notches in said first and second members to lock said first and second members together in said extended position, wherein said release device includes a lever actuation means pivotally mounted on said first member, and wherein said movable member is movable into and out of said aligned notches in said first and second members to lock and release said first and second members relative to each other.

7. A tow bar assembly comprising first and second telescopic members, said second telescopic member connectable to said first telescopic member and slidable within said first telescopic member, said first and second telescopic members forming an opening, and a locking means for releasably locking said first and second telescopic members in an extended position, said locking means including a movable member, said movable member including an extended and circular element adapted to enter said opening and contact said first and second telescopic members to maintain said first and second telescopic members in a locked relationship, and release means mounted on one of said telescopic members to move said movable member and said counterpart out of contact with said first and second telescopic members to permit slidable movement between said first and second telescopic members.

8. A tow bar assembly as set forth in claim 7, wherein said movable member includes a spring to bias said movable member containing said element in said opening and a cover fastened to said first telescopic member to hold said spring.

9. A tow bar assembly as set forth in claim 7, including a plurality of said first and second members, a plurality of universal connectors, with eyebolts configured to be mounted on a towed vehicle completing said universal connector, one of said universal connectors attached to each one of said plurality of said first and second telescopic members for attaching said tow bar assembly to a towed vehicle.

10. A tow bar assembly as set forth in claim 7, including an apex member for attaching a pair of said first and second telescopic members to a towed unit.

B 1
11. A tow bar assembly as set forth in claim 7, wherein a plurality of openings are formed in said second telescopic member for alignment with said opening formed in said first telescopic member when said first and second telescopic members are in said extended position.

12. A tow bar assembly as set forth in claim 7, including stop means connectable with said first telescopic member and extending to said second telescopic member, said stop means contactable with said first telescopic member to prevent separation of said first and second telescopic members as a result of overextending said second telescopic member relative to said first telescopic member.

13. A coupling for coupling interacting members one slidable in the other, wherein said members define an opening for an extended and circular counterpart, wherein said counterpart penetrates said opening to hold said members in position, and wherein said members exert forces on said counterpart, and release means between said counterpart and said members to release said members.

14. A pressure release tow bar made with inner and outer telescopic square tubing, latch means for unhooking with leverage or mechanical advantage whereby a tow vehicle is backed up before unhooking putting force on said tow bar members and said tow bar coupling, this force is released with a latch of at least 10:1 leverage, or ten times mechanical advantage making said pressure release tow bar ten times easier to unhook under forces than a conventional tow bar.

Subp 17
15. A tow bar assembly including first and second frame members with an open end, each of said first and second frame members including third and fourth telescopic frame members slidable within said open end of said first and second telescopic frame members, a locking means for releasably locking said first and second telescopic members in an extended position, said locking means including a movable member adapted to extend between and contact said first and second telescopic members in a locked relationship, and a release means mounted

B, 1
on one of said telescopic members to move said movable member out of contact with said first and second telescopic members to permit slidable movement between said first and second telescopic members, a universal mounting means adapted to be connected to a towed vehicle, said universal mounting means comprising a pair of laterally-spaced coaxial eye bolts adapted to be connected to a towed vehicle, a hollow connecting member located between said spaced eye bolts, a journal pin extending through said spaced eye bolts and said hollow connecting member to permit rotary movement of said hollow connecting member around said journal pin, said hollow connecting member including a journaled extension for connection to said first and second frame members or said third and fourth frame members to provide rotary movement of said elongated frame members, and said journal in said journaled extension member is perpendicular to and connected to said hollow in said hollow connecting member.

16. A tow bar assembly including first and second frame members and an open end, each of said first and second frame members including third and fourth telescopic frame members slidable within said open end of said first and second telescopic frame members and a distal end, with a universal mounting means adapted to be connected to a towed vehicle and connected to an end of said first and second frame members or said third and fourth frame members.

17. A universal mounting means comprising a pair of laterally-spaced coaxial eye bolts adapted to be connected to a towed vehicle, a hollow connecting member located between said spaced eye bolts, a journal pin extending through said spaced eye bolts and said hollow connecting member to permit rotary movement of said hollow connecting member around said journal pin, said hollow connecting member including a journaled extension for connection to said first and second frame members or said third and fourth frame members to provide rotary movement of said elongated frame members, and said journal in said journaled extension member is perpendicular to and connected to said hollow in said hollow connecting member.

Sub 1.7 18. A tow bar assembly as shown in claim 1, wherein said movable member is positioned and manipulated by primary and secondary springs to lock and release said members;

said primary spring activated by a cam or a locking lever, so when activated, overrules said secondary spring to move said movable member to lock said first and second members; and

B, when said cam is released on said primary spring, said secondary spring moves said movable member out of said opening releasing said members.

19. A tow bar as claimed in claim 1, wherein said movable member is positioned and manipulated by one spring.

~~20. A tow bar assembly as set forth in claim 1, wherein said first telescoping member is of 1 1/2" or 1 3/4" square tubing;~~

~~said locking device protrudes a maximum of 7/8" up from the top of the first member that is the top of said tow bar in a tow position;~~

~~said locking device protrudes a maximum of 1 1/8" from the sides of said first member in said tow position, said locking device protrudes a maximum of 1/4" on the inside of said first member in said tow position; and~~

~~said maximum protrusion of above distances of said locking device are allowable if attained in said towing position or said stored position.~~

Sub B.1
21. A tow bar assembly as set forth in claim 7, including a lever actuator means including a latch plate pivotally mounted on the first member with a pin means depending therefrom, bias means for continually urging the latch plate and pin means toward said apertures, said lever actuating means including a pivoting lever member having an upwardly extending projection engaging the underside of the latch plate, the pivot points of the latch plate and the lever member being so disposed relative to each other and projection to permit high leverage release of the pin means from the second aperture.

22. A tow bar assembly as set forth in claim 7, including a lever actuator means including a latch plate pivotally mounted on the second member with a pin means extending upwardly therefrom, bias means engaging the latch plate at its underside for maintaining the pin means in an upward position toward said apertures, said lever actuating means including a pivoting lever having a cam portion engaging the underside of the biasing means, the cam portion when engaging the biasing means providing a high leverage force of the

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latch plate, and when disengaged, allowing the latch plate and pin means to gravitationally drop from the apertures.

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